

In the claims

1. (currently amended) A dispensing system for ~~accurately~~ dispensing a material onto a substrate, the system comprising:

~~a dispensing element having a metering device that controls a quantity of the material dispensed from the dispensing element to the substrate; and~~

~~a positioning system coupled to the dispensing element to move the dispensing element over the substrate in accordance with a dispensing velocity profile;~~

~~a calibration device to calibrate the quantity of material dispensed having a dish that receives the material from the dispensing element during a calibration routine of the dispensing system, the dish including a conical protuberance extending from a center portion of the dish;~~
~~and~~

~~— a controller, coupled to the positioning system, the dispensing element and the calibration device to control operation of the dispensing system, wherein the controller is constructed and arranged to control the positioning system and the dispensing element such that the dispensing element is moved and controlled according to a calibration velocity profile to dispense material into the dish during a the calibration routine, and wherein the calibration velocity profile is representative of the dispensing velocity profile.~~

2. (currently amended) The system of claim + 45, wherein the dish is removably connected to the calibration device.

3. (currently amended) The system of claim + 45, wherein the dish further includes a tab for conveying the dish to or from the calibration device.

4. (currently amended) The system of claim + 45, wherein the dish ~~further includes a protuberance for operatively removing removes~~ an amount of the material ~~dispensed~~ from the dispensing element during the calibration routine.

5. (currently amended) The system of claim + 45, wherein the dish is disposable.

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6. (currently amended) The system of claim + 45, wherein the dish will withstand a temperature that will allow an amount of dispensed the material collected in the dish to cure.

7. (currently amended) The system of claim + 45, wherein the dish is fabricated from a generally conductive material.

8-13. (canceled)

22-25. (canceled)

30-36. (canceled)

37. (new) A weight measuring apparatus for weighing a material deposited from a dispensing system, the weight measuring apparatus comprising:

a weigh scale module;
a frusta-conical pedestal, coupled to the weigh scale module; and
a weighing dish having a conical protuberance extending from a center portion of the weighing dish,

wherein the weighing dish is mounted on the frusta-conical pedestal such that an inner portion of the conical protuberance contacts the frusta-conical pedestal for balancing the weighing dish on the frusta-conical pedestal for collection of a sample to be weighed.

38. (new) The weight measuring apparatus of claim 37 wherein the weighing dish is removably mounted on the frusta-conical pedestal.

39. (new) The weight measuring apparatus of claim 38 wherein the weighing dish further includes a tab for conveying the dish to or from the pedestal.

40. (new) The weight measuring apparatus of claim 39 wherein the conical protuberance is positioned to remove a tail of the material dispensed into the dish.

41. (new) The weight measuring apparatus of claim 40 wherein the dish is disposable.

Restrict

42. (new) The weight measuring apparatus of claim 41 wherein the dish will withstand a temperature that will allow an amount of the material collected in the dish to cure.

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43. (new) The weight measuring apparatus of claim 42 wherein the dish is fabricated from a generally conductive material.

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44. (new) The weight measuring apparatus of claim 43 wherein a diameter of a top portion of the frusta-conical pedestal is substantially the same as a diameter of a top portion of the conical dish, such that the conical dish is supported by the top portion of the pedestal.

45. (new) The dispensing system of claim 1 further comprising a frusta-conical pedestal, coupled to the calibration device, for supporting the dish while the dish receives the material from the dispensing device.

46. (new) The dispensing system of claim 45 wherein the dish includes an annular trough portion surrounding the conical protuberance, and wherein the protuberance is substantially centered in the annular trough.

47. (new) A dish for collecting and retaining a material, the dish comprising:

an inverted conical cup, the cup creating an aperture in a bottom face of the dish;
and

an annular trough portion, the annular trough portion surrounding the inverted conical cup such that an outer wall of the inverted conical cup is an inner wall of the annular trough of the dish,

wherein the height of the inverted conical cup is substantially the same as the height of an outer wall of the annular trough.

Restrict

48. (new) The dish of claim 47 wherein the inverted conical cup is constructed and arranged to be supported by a frusta-conical pedestal by inserting the frusta-conical pedestal into the aperture in the bottom face of the dish.

49. (new) The dish of claim 48, wherein the dish withstands a temperature that will allow the material collected in the dish to cure. *Restrict*

50. (new) The dish of claim 49, wherein the dish is fabricated from a generally conductive material.

51. (new) The dish of claim 50, wherein the height of the inverted conical cup is substantially greater than the height of the outer wall of the annular trough.

52. (new) A dispensing system that dispenses a material onto a substrate according to a dispensing pattern, the dispensing system comprising:

(a.) a gantry system;

(b.) a dispensing pump, coupled to and movable on the gantry system, to dispense a quantity of the material having a tail of the material and constructed and arranged to follow a calibration pattern that is representative of the dispensing pattern;

(c.) a calibration system having a dish, the calibration system constructed and arranged to collect the quantity of material dispensed from the pump during the calibration pattern in the dish, measure the amount of the material, and compare the amount of the material with a target quantity,

wherein the dish comprises a protuberance such that the pump and the dish move relative to one another, and as the pump passes the protuberance, the tail of the material contacts the protuberance and the dish collects the dislodged tail of material for measurement by the calibration system; and

(d.) a controller to adjust characteristics of the dispensing system when a difference between the measured material and the target quantity is greater than a predetermined tolerance.

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53. (new) The dispensing system of claim 52 wherein the calibration system is constructed and arranged to repeat a calibration routine prior to dispensing on a substrate until the difference between the measured material and the target quantity is less than the tolerance.

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